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PRESENTATION

4094: Evolutionary history of the Podagrionini, parasitoids of praying mantises

Friday, September 30, 2016 11:00 AM - 11:15 AM

Convention Center - Room W230 D

Toryminae includes 55 valid genera and about 950 described species. It has been historically classified together with Megastigminae in the family Torymidae, but our recent studies have shown that these two subfamilies are not closely related. One of Toryminae tribes is Podagrionini. It seems all Podagrionini are strictly Mantodea oothecae-associated and develop as exoparasitoids of mantid eggs in their oothecae. Free-living parasitoid females usually search for oothecae laid and glued by mantid females onto different kinds of substrate and oviposit into oothecae using often very long ovipositors. On the other hand, we know also species with very short ovipositors. Some of those females attach to mantid females and oviposit into the mantids' oothecae as they are formed. Due to rapid evolution and despite extremely similar life-history, Podagrionini diversified into many lineages. However, it has been shown recently that morphological classification of Podagrionini does not correspond to molecular-based study (4809 nucleotides from 5 genes) of this tribe. Our results show that previous morphology-based classification is one of the most underestimated over the entire subfamily Toryminae. Therefore we propose a new classification of Podagrionini using molecular phylogeny, life-history and morphological data of extant taxa as well as fossils to show convergent morphological adaptations across the tribe. Such data allow us to reassess the evolutionary history of Podagrionini.

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